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EXAMINER
CHU, KIM KWOK

ART UNIT	PAPER NUMBER
2653	6

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/056,366	VERBAKEL ET AL.	
	Examiner	Art Unit	
	Kim-Kwok CHU	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 3/31/2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-19,22,23,25,27,29,31,33 and 35* is/are rejected.

7)☒ Claim(s) *20,21,24,26,28,30,32,34 and 36-42* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *09/328,024* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Response to Remarks

1. Applicant's Remarks (paper 5) filed on March 31, 2003 have been fully considered but they are not persuasive.

(a) Applicant states that the reason of Yonemitsu's copy of a TOC is for "some computer applications do not easily recognize data recorded in sectors having negative addresses" (page 20 of Remarks, lines 2-4). Accordingly, Yonemitsu's above teaching is one of his reasons to have 3 copies of TOC (Fig. 4B; column 11, lines 66 and 67). Other obvious reason, such as redundancy of the Table of Contents, is well known. For example, Kawamura et al. (U.S. Patent 6,308,004) teaches that "same TOC data are stored in three regions ..... to improve reliability for error (Fig. 3, column 13, lines 28-31); and

(b) Applicant states that Yonemitsu's TOC is "not a sub-TOC and therefore not satisfy the limitation of claim 10 which is specific to sub-TOCs" (page 2 of the Remarks, lines 14 and 15. Accordingly, the use of Yonemitsu's TOC as a reference in addition to Nishida's teaching is to show that the duplication of a TOC in Applicant's invention is not novel. On the other hand, the name "a TOC" such as Yonemitsu's or "a sub-TOC" such as Applicant's is just a variation of labeling a TOC area. In fact, it is well known that both a TOC and a sub-TOC are program management data such as program addresses, program

lengths, program titles etc.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 10-24, 31, 32, 35, 36, 40 and 42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 29-34 of U.S. Patent No. 6,370,090. Although the conflicting claims are not identical, they are not patentably distinct from each other.

4. With respect to the present claims 10-21, its subject matters are also claimed in the '090 patent. For example:

(a) in claim 10, a method for producing a unitary storage medium ('090 patent; claim 22, line 1);

(b) in claim 10, providing at least two mutually logically conforming sub-TOCs for the same track area in one or more track areas of a unitary storage medium ('090 patent; claim 22, lines 9 and 10);

(c) as in claim 10, each sub-TOC having structures for storing information for determining the configuration of the same information items stored In the track area ('090 patent; claim 22, lines 2-5; TOC stores items configuration);

(d) as in claim 10, the sub-TOC allowing retrieving the configuration of the same information item in the track area from at least any correct copy of the sub-TOCs ('090 patent; claim 22, lines 9-11; any one of the two mutually logically conforming sub-TOCs can be retrieved);

(e) as in claim 10, providing at least one master-TOC having structures for storing information for determining the position of the sub-TOCs ('090 patent; claim 22, lines 11 and 13);

(f) as in claim 11, storing the information items in the track area ('090 patent; claim 22, line 1; audio items are stored);

(g) as in claim 11, storing in each of the sub-TOC structures the configuration of each of the information items ('090 patent; claim 22, lines 1-5; TOC stores the configuration of each of the information items);

(h) as in claim 11, storing the content and position of the information items in the track area ('090 patent; claim 22, lines 1-5; TOC stores the configuration of each of the information items);

(i) as in claim 11, storing in the master-TOC structures the information for determining the position of the at least two mutually logically conforming sub-TOCs ('090 patent; claim 22, lines 11 and 13);

(j) as in claim 12, the information items include audio information ('090 patent; claim 22, line 1);

(k) as in claim 13, the unitary storage medium is an optical disc ('090 patent; claim 33, line 5);

(l) as in claim 14, the information is stored by pressing consumer discs from a master disc ('090 patent; claim 22, an audio-centered information is obviously stored by a master disc pressing process because it can be mass produced in a consumer market);

(m) as in claim 15, the information is stored using an optical write head ('090 patent; claim 22, lines 6-8; the recording device is the write head);

(n) as in claim 16, two sub-TOCs assigned to the track area are positioned at opposite ends of the track area ('090 patent; lines 9 and 10; it is obvious that the position of the

sub-TOCs should be positioned on both ends of an audio item so that it does not separate the audio items);

(o) as in claim 17, the number of sub-TOCs assigned to the track area is exactly 2 ('090 patent; claim 22, lines 9 and 10; two identical sub-TOCs are obviously an optimal choice because a back-up is needed);

(p) as in claim 18, the master-TOC is positioned at a predetermined offset location with respect to an initial location on the medium ('090 patent; claim 22, lines 12 and 13; a guard region such as a black sector is always position before any data sector); and

(q) as in claim 19, the mutually logically conforming sub-TOCs are identical ('090 patent; claim 22, lines 9 and 10).

(r) as in claim 20, the information in one of the at least two mutually logically conforming sub-TOCs is a bitwise inversion of the information in another of the at least two mutually logically conforming sub-TOCs ('090 patent; claim 24, lines 1-4);

(s) as in claim 21, the storage medium also includes a file structure, and the information items may be accessed using either the TOC structure or the file structure; the file system for audio information conforms to a standard selected from: UDF, and ISO 9660 ('090 patent; claims 24 and 34);

(t) as in claim 21, the file structure includes a root directory that points to the master-TOC and to subdirectories; the sub-directories include a sub-directory containing stereo audio information items and another sub-directory containing audio information items having three or more channels('090 patent; claims 28 and 29; three or more channels are obvious as long as stereo channels are stored as audio items); and

(u) as in claim 21, the storage of the audio information is selected from one or more of a lossless compression format; and a lossy compression format ('090 patent; claims 30 and 32).

5. With respect to the present claims 22-24 and 36, its subject matters are also claimed in the '090 patent and are rejected for the same reasons of obviousness double patenting as used above.

6. With respect to the present claims 31, 32 and 40, its subject matters are also claimed in the '090 patent and are rejected for the same reasons of obviousness double patenting as used above.

7. With respect to the present claims 35 and 42, its subject matters are also claimed in the '090 patent and are rejected for the same reasons of obviousness double patenting as used above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

9. Claims 10-19, 22, 23, 25, 27 29, 31, 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. (U.S. Patent 5,384,678) in view of Yonemitsu et al. (U.S. Patent 5,592,450).

Nishida teaches a method for producing a storage medium very similar to that of the instant invention. For example, Nishida teaches the following steps:

(a) as in claim 10, providing a sub-TOC in one or more track areas of a unitary storage medium (Fig. 2);

(b) as in claim 10, the sub-TOC having a structure for storing information for determining the configuration of the items stored in the track area (Fig. 2);

(c) as in claim 10, providing at least one master-TOC having structures for storing information for determining the position of the sub-TOCs (Fig. 2);

(d) as in claim 11, storing the information items in the track area (Fig. 2);

(e) as in claim 11, storing in each of the sub-TOC structures the configuration of each of the information items including the content and position of the information items in the track area (Fig. 2);

(f) as in claim 11, storing in the master-TOC structures the information for determining the position of the sub-TOCs (Fig. 2; sub-TOCs are located in each chapter);

(g) as in claim 12, the information items include audio information (Fig. 2); and

(h) as in claim 18, the master-TOC is positioned at a predetermined offset location with respect to an initial location on the medium (Fig. 2).

However, Nishida does not teach the following:

(a) as in claim 10, providing an additional mutually logically conforming sub-TOC for the same track area in one or more track areas of a unitary storage medium;

(b) as in claim 10, the additional sub-TOC having structures for storing information for determining the configuration of the same information items stored in the track area, thereby allowing retrieving the configuration of the same information item in the track area from at least any correct copy of the sub-TOCs;

(c) as in claim 13, the unitary storage medium is an optical disc;

(d) as in claim 14, the information is stored by pressing consumer discs from a master disc;

(e) as in claim 15, the information is stored using an optical write head;

(f) as in claim 16, two sub-TOC assigned to the track area are positioned at opposite ends of the track area;

(g) as in claim 17, the number of sub-TOCs assigned to the track area is exactly 2; and

(h) as in claim 19, the mutually logically sub-TOCs are identical.

Yonemitsu teaches a recording medium having the following:

(a) as in claim 10, providing an additional mutually logically conforming TOCs in a unitary storage medium (Fig. 5);

(b) as in claim 10, the additional TOC having structures for storing information for determining the configuration of the same information items stored in the track area, thereby

allowing retrieving the configuration of the same information item in the track area from at least any correct copy of the TOCs (Fig. 5);

(c) as in claim 13, the unitary storage medium is an optical disc (Fig. 2);

(d) as in claim 14, the information is stored by pressing consumer discs from a master disc (Fig. 2, the disc is a CD-ROM which is manufactured by pressing process); and

(e) as in claim 15, the information is stored using an optical write head (Fig. 2; the disc is a WORM , column 13, liens 43-46).

Refer to the feature not taught by Nishida in claims 10, 17 and 19: There is an advantage of duplicating a TOC file in the event the original TOC file cannot be read. For example, Yonemitsu's file structure has a copy of the TOC file as redundant TOC information. Hence, it would have been obvious to one of ordinary skill in the art at the time of invention to make an additional TOC file such as Nishida's chapter 2 TOC file within the chapter similar to Yonemitsu's, because the extra TOC information in the same chapter/track area can protect the TOC file when any part of it cannot be read properly. And since the Chapter 2 TOC file of Nishida's is a sub-TOC file, its copy is also a sub-TOC file as in Applicant's

claim 10. Furthermore, Nishida's chapter 2 has two identical sub-TOC files as in Applicant's claims 17 and 19.

Refer to the features not taught by Nishida in claims 13-15: Although Nishida does not teach that his recording medium is an optical disk, for the advantage of recording capacity, it would have been obvious to one of ordinary skill in the art to use an optical medium such as Yonemitsu's, because an optical recording medium such as a CD-ROM, WORM etc. can be manufactured in a large volume quickly by a pressing process. Furthermore, the Yonemitsu's optical recording medium can be written with user information and the medium's content can be searched instantly.

Refer to the features not taught by Nishida in view of Yonemitsu in claim 16: Although Yonemitsu does not specify his copy of TOC file can be located at the end of a track area, for the benefit of better file management, it is easier to access at the end of a track. Hence, for the location of the copy TOC file, it would have been obvious to one of ordinary skill in the art to place it at the end of a track similar to Applicant's instead of other locations such as Yonemitsu's, because the end of the track has a definite address which can be accessed easily without an additional step of searching it's location.

10. Apparatus claims 22 and 23 are drawn to the apparatus corresponding to the method of using the same as claimed in claims 10, 11 and 13. Therefore apparatus claims 22 and 23 correspond to method claims 10, 11 and 13, and are rejected for the same reasons of anticipation (obviousness) as used above.

11. Apparatus claim 25 is drawn to the apparatus corresponding to the method of using the same as claimed in claims 10, 11 and 13. Therefore apparatus claim 25 corresponds to method claims 10, 11 and 13 is rejected for the same reasons of anticipation (obviousness) as used above. Claim 25 however also recites the following limitations which is taught in the combination of Nishida in view of Yonemitsu:

(a) a first control means for positioning a read head for reading information items stored in a track area (read head positioning means such as Yonemitsu's disc drive 225 and system controller 230 in Fig. 2); and

(b) a second control means for positioning a read head for reading sub-TOC depending on position information read from at least one master-TOC (read head sector positioning means such as Yonemitsu's disc drive 225 and system controller 230 in Fig. 2).

12. Apparatus claim 27 is drawn to the apparatus corresponding to the method of using the same as claimed in claims 10, 11 and 13. Therefore apparatus claim 27 corresponds to method claims 10, 11 and 13 is rejected for the same reasons of anticipation (obviousness) as used above. Claim 27 however also recites the following limitations which is taught in the combination of Nishida in view of Yonemitsu:

(a) a first control means for positioning a write head to write information items stored in a track area (write head positioning means such as Nishida's step S13 in Fig. 3); and

(b) a second control means for positioning a write head to write configuration information (chapter write positioning means such as Nishida's step S13 in Fig. 3).

13. Apparatus claims 29 and 33 are drawn to the apparatus corresponding to the method of using the same as claimed in claims 10, 11 and 13. Therefore apparatus claims 29 and 33 correspond to method claims 10, 11 and 13, and are rejected for the same reasons of anticipation (obviousness) as used above. Claims 29 and 33 however also recites the following limitations which is taught in the combination of Nishida in view of Yonemitsu:

(a) a read/write head (read/write head 212 as in Yonemitsu's Fig. 2); and

(b) a disc driver (disc driver 225 as in Yonemitsu's Fig. 2);

(c) a read/write head position controlling means (disc driver 225 and pickup controller 230 as in Yonemitsu's Fig. 2); and

(d) a disc clamping device for holding the disc (disc holder is an inherently device for secure the moving disc as in Yonemitsu's Fig. 2).

14. Apparatus claim 31 is drawn to the apparatus corresponding to the method of using the same as claimed in claims 10, 11, 13 and 14. Therefore apparatus claim 31 corresponds to method claims 10, 11, 13 and 14, and is rejected for the same reasons of anticipation (obviousness) as used above. Claim 31 however also recites the following limitation which is taught in the combination of Nishida in view of Yonemitsu:

(a) a mast disc and pressing means (Fig. 1 of Yonemitsu illustrates an optical disc mastering process).

15. Apparatus claim 35 is drawn to the apparatus corresponding to the method of using the same as claimed in claims 10, 11, and 13. Therefore apparatus claim 35 corresponds to method claims 10, 11 and 13, and is rejected for the same reasons of anticipation (obviousness) as used above. Claim 35 however also recites the following limitation which is taught in the reference of Nishida in view of Yonemitsu:

(a) a TOC mechanism (device 223 in Fig. 2 of Yonemitsu).

Allowable Subject Matter

16. Claims 20, 21, 24, 26, 28, 30, 32, 34 and 36-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 20, 21, 24, 26, 28, 30, 32, 34 and 36-42, the prior art of record fails to teach or fairly suggest that the information in the mutually logically conforming sub-TOCs is a bitwise inversion of a select identical information.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made

obvious over, the prior art of record.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kawamura et al. (6,308,004) is pertinent because Kawamura teaches two identical TOCs in a recording/reproducing device.

Adachi (5,319,505) is pertinent because Adachi teaches two identical TOCs in a recording/reproducing device.

19. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C. 20231 or faxed to:

(703) 308-6306, (for formal communications intended for entry) or:

(703) 308-6306, (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (703) 305-3032.

THANG V. TRAN
PRIMARY EXAMINER

KC 6/12/03

Kim-kwok CHU
Examiner AU2651
June 12, 2003

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